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Inaugural dissertation
on
Cynanche Trachealis
by Littleton G. Coleman

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Cynanche Trachealis

This disease has various appellations applied to it by different authors. It has been called suffocatio stridula, Angina Mlypema, the popular name is Croup or Hives, the latter is a corruption of the word heavens. Unquestionably the best nomenclological title is Trachitis, it very manifestly designates the nature of the complaint & gives uniformity to medical nomenclature & corresponds with Pleuritis, Gastritis & all of the other names applied to inflammatory affections. It is considered a disease of modern date. Dr Home of Edinburgh is considered the first who described the disease, he was the professor of Materia Medica in the university of Edinburgh & the cotemporary of Cullen. Cynanche Trachealis is for the most part confined to early life, occurring generally between the first & fifth year it sometimes attacks infants in the month & also adult subjects, such cases must be considered anomalous deviations, from the common course & nature of the complaint. It appears in some instances to belong to families. It is alledged by some that Croup is propagated by contagion, but there is no good reason for such a

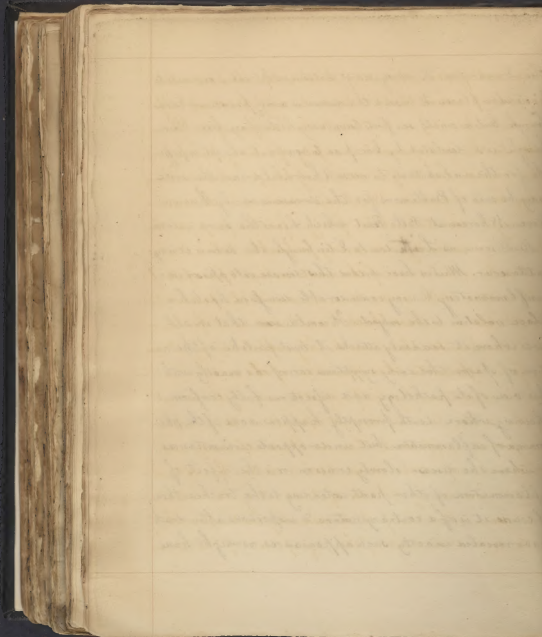
Quintus Junius

Quintus Junius, a Roman statesman and orator, was born in 145 BC. He was a member of the Junia gens, one of the most prominent families in Rome. He was known for his eloquence and his role in the political life of the Republic. He was a member of the Senate and held several important offices, including the consulship. He was also known for his opposition to the reforms of Gaius Gracchus. He was eventually killed by a mob in 121 BC.

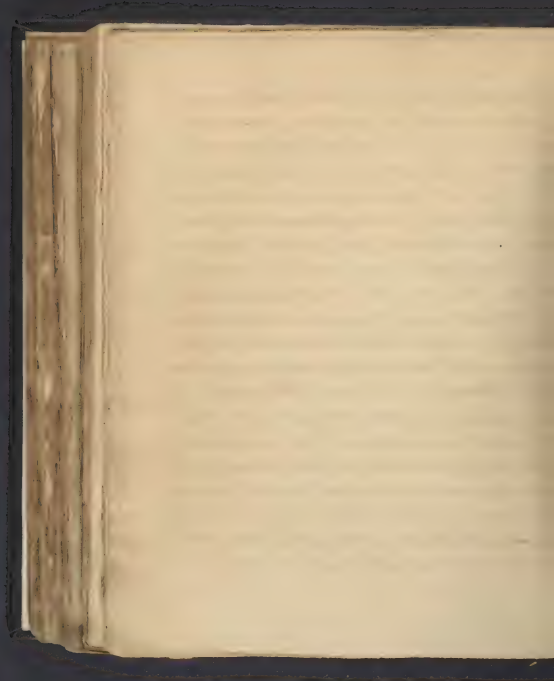
supposition. Dr Cullen says it very commonly with the ordinary
symptoms of a catarrh, but sometimes the peculiar symptoms of
the disease shew themselves at the very first. He says these pecu-
liar symptoms are the following. a hoarseness, with some shillings
& ringing sound, both in speaking & coughing, as if the noise
came from a brazen tube. at the same time, there is some of pain
about the Larynx, some difficulty of respiration, with a cooing
sound in inspiration, as if the passage of the air were straitened.
the cough which attends it is commonly dry & if any thing be spit
up it is a matter of a purulent appearance & sometimes films
resembling portions of a membrane. Together with those symp-
toms there is a frequency of the pulse, a restlessness & an uneasy
sense of heat. When the internal fauces are involved, they are
sometimes without any appearance of inflammation, but fre-
quently a redness & even swelling appear & sometimes in the
fauces there is an appearance of matter like to that rejected
by coughing. With the symptoms now described, continues
Cullen, & particularly with great difficulty of breathing & a
sense of strangling in the fauces, the patient is sometimes
taken off suddenly. Croup originates in a moist, cold & asthenic

atmosphere & on this account is more prevalent in the spring than in any other season. It has been observed to be most prevalent near the sea coast, where the air is loaded with moisture. But it is frequently met with in inland situations, & particularly in those which are marshy. It is less known in temperate than in the northern regions of Europe. This disease may be distinguished from Acute Asthma by the following diagnostics. In the former the cough is frequently ringing in our ears, whereas in the latter there is little or no cough. in Croup there is seldom or ever any remission, whereas in Acute Asthma it is one of the most striking phenomena of the disease & is attended with some evacuation as belching vomiting or purging. In Croup the pulse is strong with much febrile heat, the urine high coloured & the voice shrill & small, in acute asthma the pulse although perhaps equally quick is less full, the urine is limpid & the voice croaking and deep. however great the dyspnea the deglutition is free in Croup. Some authors consider the disease as occasionally epidemic, which is probably a fact. It was considered as such, when General Washington fell a victim to it in the neighbourhood of Alexandria Virginia.

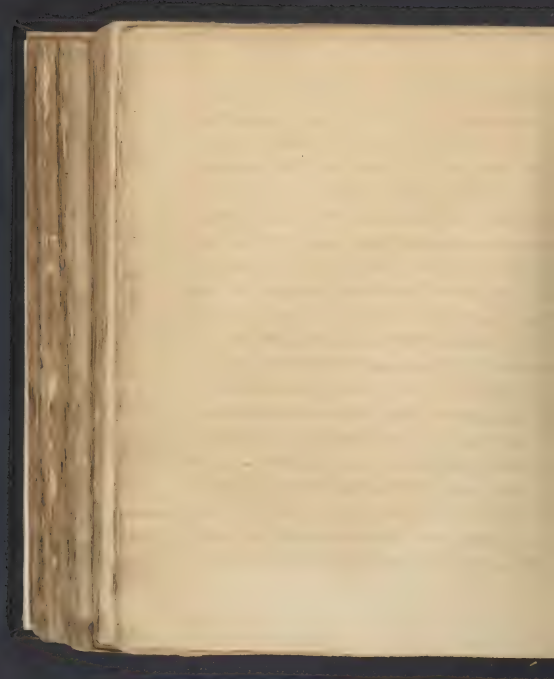
Anno Domini 1779. It is very evident that this complaint is endemial to particular places. It is said the disease is rarely known in Edinburgh but a small sea port town very little way from Edinburgh is so devolated by Group as to render it almost impossible for the inhabitants to raise their children. the same may be said of Baltimore for the disease is rarely known there. Whereas at Fells Point which bears the same relation to Baltimore, as Lith does to Edinburgh, the disease is very apt to occur. Writers have divided this disease into spasmodic & inflammatory & very considerable discussion has taken place relative to the subject. It would seem that in all cases where it suddenly attacks it must partake of the nature of spasm. the early symptoms correspond exactly with this view of its pathology and dissections fully confirm it. shewing where death promptly happens. none of the phenomena of inflammation. but under opposite circumstances or where the disease slowly comes on, or is the effect of inflammation of other parts, extending to the trachea, then of course it is of a contrary nature & inspections after death have revealed exactly such appearances, as might have



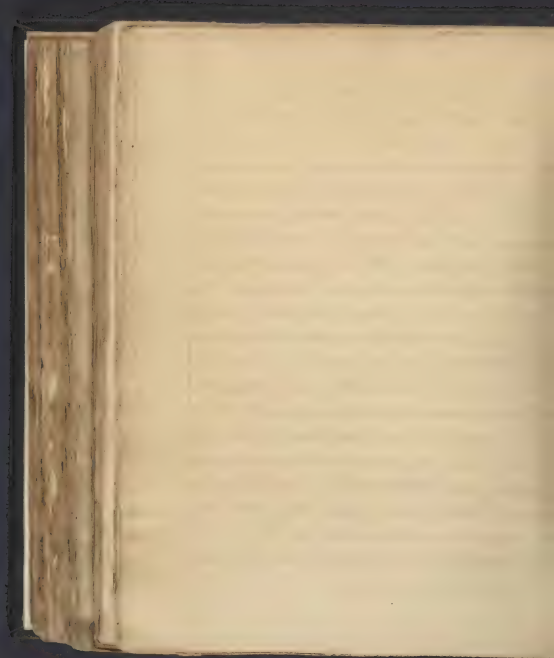
been anticipated. Admitting however the above distinction, we are not aware that it leads to any practical difference. Especially as it relates to the use of emetics. We misapprehend the indispensable necessity of actively puking on the commencement of an attack of hump, whatever theory may be entertained. We always commence with endeavouring to vomit the child freely & for this purpose the ipecacuanha is decidedly preferable. taken at short intervals, & this is one of the most certain & powerful of all emetics, at the same time we direct the patient to be placed in a warm bath & continued in it for ten or fifteen minutes, this is an highly useful remedy, it may fail to promote the operation of the emetic. It will indeed sometimes by itself effect a cure of the disease. If the emetic however do not operate or its operation has proved ineffectual, then we bleed copiously and afterwards repeat the warm bath & emetic. The disease must be exceedingly obstinate if it do not yield to this treatment. Nevertheless it occasionally continues with little or no abatement of the symptoms of the disease.



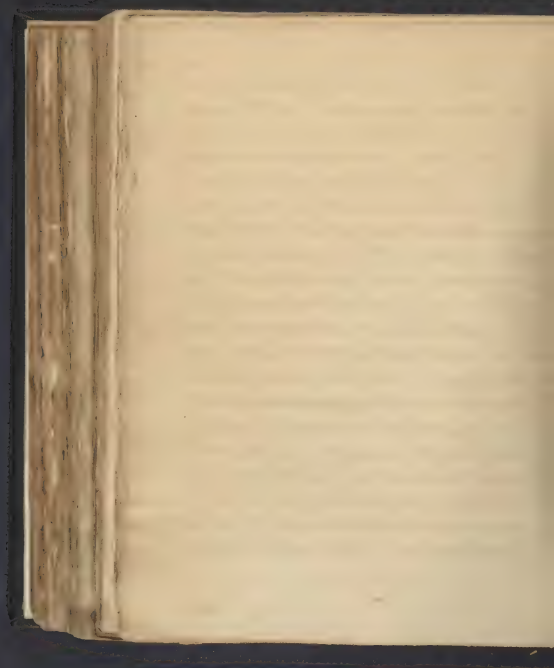
in despite of the numerous attempts. Under these circumstances
we resort to topical bleeding either by leeches & cups & if the
inflammation has subsided we apply, either on the arms
to the extremities or from one ear to the other. If the preceding
means fail or if the symptoms are so alarming as to require it,
we should bleed ad reliquium animi. When pushed to this ex-
tent reversion is almost uniformly successful. The moment
opercle is produced by reversion the cough is renewed,
impeded respiration & fever all totally disappear, the disease
being thus broken, which is always shown by the removal of
the preceding symptoms & still more by the restoration of
the susceptibility of the system to the operation of medicine.
We administer Calomel not in small & separate doses but
generally recommended but in the largest possible dose
in order that it may speedily & actively purge, in this stage of
the disease evacuations from the alimentary canal carry off the lingering symptoms
of disease, denote subsiding inflammation but if we push beyond
moderate purgation we shall find that even in some the disease is even
prolonged. We are obliging the remain of purgation that denotes subsiding inflammation
proportion the practice just mentioned is adapted chiefly to the early or



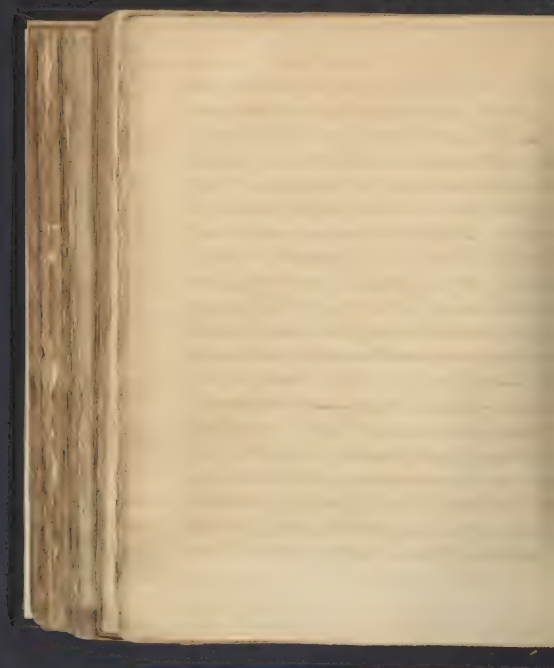
forming stage of lumps. At this period the disease is yet confined
to the trachea and consists either in a spasmodic constriction of the
tube, or in an inflammatory disease of its lining membrane. But
the disease being suffered to continue for eight or ten hours and
sometimes even less time, it extends to the Bronchia and into
the very substance of the lungs & a vast secretion of mucus or phlegm
and an enlarged or congested state of the lungs now take place
precisely as in Peripneumonia Pleth. the symptoms at this criti-
cal juncture are different from those of the first stages. In the
commencement of an attack of croup, the voice is hoarse, the
cough is hard, dry and not easily compared to the sharpness
of harking or to the crowing of a young chicken. at the same time
there is more or less of fever, a considerable degree of anxiety and
restlessness and an uncomfortable mal-troth. the child will not
remain long in one posture and cannot be completely tranquil.
It is he whines over and frets and seems to be exceedingly uneasy
without suffering much positive pain. but in the following and
more advanced stages, all of those symptoms exist which indi-
cate an interrupted circulation in the lungs. these organs
loaded and oppressed are unable to perform their functions the



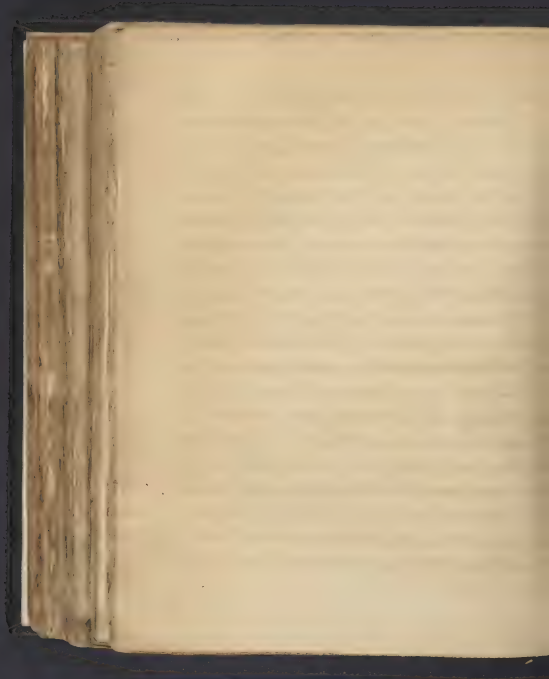
countenance at the same time is mottled, the cheeks have a circum-
scribed flush together with some mixture of lividness, the eyes are
prominent and inflamed, the pupil is entirely dilated and the
reflexion of the countenance wild and horrid, the respiration
is more or less laborious with a full and disturbed pulse -
The child sinking under the disease, the respiration becomes
more tranquil, with a weak and irregular circulation. The disease
in every respect is *Pneumonia Pleth.* and must be treated accord-
ingly. The indication in the first place is to relieve the lungs,
and to establish a free and equable circulation. To accomplish this
purpose, the child should be placed in the warm bath, and
when it is in this situation, copious sweating should be excited
by saline stimulating emetics, as Sulphate of Ipecac and if this is
not at hand, tartarised antimony. As soon as the pulse will
justify the remedy, we should have recourse to venesection,
drawing a little blood at a time, suppressing the flow and
watching the effect on the system. If you find the first bleeding
beneficial, repeat it again from time to time, until your
views in this respect are accomplished, the necessity of such ex-
treme transfusion in the use of the lancet in this case



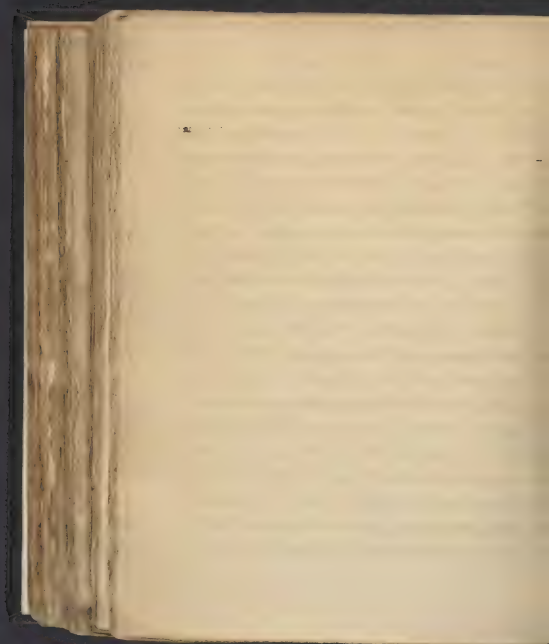
more from so much blood being taken out of the circulation and con-
fined in a half stagnant condition in the lungs so that a small
portion suddenly retracted from the system by the operation of
venesection might reduce the system below the point of reaction
and there induce immediate death. but as in the case of Pneu-
monia & Pleth. where we cannot at all employ the lancetive
we substitute in its place topical depletion from the chest
by cups or leeches. This remedy is of unquestionable advantage.
In co-operating with the previous remedies a blister should be
applied over the whole of the chest. but if the case is so urgent
as not to give time for the drawing of the blister, some means
of a more speedy resuscitation should be substituted, as cloths rung out
in boiling water, or pledgets of lint steep in linseed oil & Canthari-
des with spirits of turpentine. The subsequent treatment con-
sists in the use of expectorants and if these are not successful wine
or vinegar of squills, a decoction of Hæmæa either alone
or in combination will answer exceedingly well. Much may be
expected at this stage of the disease from the liberal exhibition
of Calomel. Some of the Edinburgh practitioners manage Crude Mer-
cury with Calomel, the dose is immense and almost incredible.



we must bear in mind that the susceptibility of the system to venereal impressions is greatly diminished, here if the lancet had been used, the susceptibility of the system would have been increased & much smaller dose of calomel would have answered equally well. Dr Hamilton professor of medicine in the university of Edinburgh is a strong advocate for the use of the submucate of mercury in croup. He tells us in emergency where he has administered it previous to the occurrence of the convulsions the lips, and other morbid symptoms, he has completely succeeded in curing the disease. His mode of employing it is, having previously put the child into a tub of hot water heated to the ninety-sixth degree of Fahrenheit's thermometer or wrapped up in a blanket mayed of hot water. to give it a dose of from one to five grains according to the age every hour till the breathing is evidently relieved when it is gradually discontinued, beginning at first with three, and finally four or five hours to intervene between each dose, according to the state of the symptoms, the submucate of mercury is no doubt useful in croup, but the trifling mode of using it to the exclusion of other remedies, such as bleeding both generally and locally omitted, we cannot recommend.



The disease among us is generally more inflammatory, more rapid
in its progress and requires the energetic treatment mentioned
above. It has been and still is in a great measure the opinion
that the inflammatory affection in bronch. is chiefly confined
to the trachea and bronchia. but Drs Boerhaave and Cheyne have
opposed the contrary and have given a minute account of several
sections of this disease wherein the lungs were affected with
extensive inflammation and burst from the firmness of these organs
from not collapsing, when the chest was exposed and from a kind
of purulent matter found in the cells of the lungs. When brought to
natural heat it is by a resolution of the inflammation by a
expulsion of the spasms by relief to the dyspnoea and the voice be-
coming natural, with a copious and purulent secretion of the matter
issuing from the trachea &c. The unfavourable symptoms are con-
siderable difficulty in breathing, great anxiety, violent fever, frequent
cough, no expectoration, the voice becoming more hoarse
the pulse irregular and intermitting. Much has been said of the
existence of a membrane on the Larynx, which is supposed to be
the cause of death. So much consequence has been attached to this
mistake that an operation has been performed for its removal.



That such a membrane occasionally exists there can be no doubt though it is exceedingly rare. Dr. Physick has a preparation of this membrane which shows it in its perfect state, ~~and its extreme~~ ~~slenderness~~. Even if the membrane does exist, we do not know that an operation would be of any advantage, the disease does not depend on this adventitious production. There is great obstruction in the ramifications of the bronchiae and the lungs are alain a very depressed & disordered condition. even if the membrane were removed therefore we would not remove the complaint. at all events we should only palliate it. Two causes have concured to render croup more fatal than it otherwise should be. It is a very popular opinion that children, owing to extreme delicacy of constitution cannot bear any very vigorous impression of remedies, the common practice is very inert. The two causes rendering croup more fatal than it should be are an erroneous idea as respects its pathology & the feeble mode of its management. Children have been found alive at the breast of their mothers who had died from exposure to cold. they resist contagion better than adults & recover with probese from attacks of contagious and other disorders. they also sustain very well the operation of active remedies as

vomiting, purging, sweating, blisters & the loss of blood. During the growth of the body, the proportion of the fluids to that of the solids is evidently greater than when the system has attained its full size. This fullness of the blood vessels renders children particularly liable to inflammatory attacks & nearly all of their complaints partake of this character & hence they are often to be bled.

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